5E0401-A0107

1618301

EPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: 5210021893

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Rock Island Arsenal	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: SARRI-ENM-T
03 CITY: Rock Island	04 STATE: IL · 05 ZIP CODE: 61299 · 06 COUNTY: Rock Island · 07 COUNTY CODE: 161 · 08 CONG DIST: 17
09 COORDINATES LATITUDE: 41 31 06.0 · LONGITUDE: 090 32 56.0	Davenport East Quadrangle

10 DIRECTIONS TO SITE (Starting from nearest public road): Rodman Ave. NW from 16th St. bridge to intersection marked 129 on attached map (monument). Turn left and go southeast on unnamed side road to site. The old landfill is south of Sylvan Drive by Warehouse 299.

III. RESPONSIBLE PARTIES

01 OWNER (If known): US Army	02 STREET (Business, mailing, residential): SARRI-ENM-T/ Dr. W. S. Shore
03 CITY: Rock Island	04 STATE: IL · 05 ZIP CODE: 61299 · 06 TELEPHONE NUMBER: (309) 794-5504
07 OPERATOR (If known and different from owner): Same	08 STREET (Business, mailing, residential):
09 CITY:	10 STATE: · 11 ZIP CODE: · 12 TELEPHONE NUMBER:

13 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL: U. S. Army (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: ____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☒ A. RCRA 3001 DATE RECEIVED 8 / 18 / 80 (MONTH DAY YEAR) ☒ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED 6 / 2 / 81 (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES DATE 3 / 19 / 81 (MONTH DAY YEAR)
☐ NO
BY (Check all that apply): ☒ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☒ D. OTHER CONTRACTOR ☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: ____ (Specify)
CONTRACTOR NAME(S): Archeologist, Name Unknown

02 SITE STATUS (Check one): ☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION: ____ BEGINNING YEAR ____ ENDING YEAR ☒ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Oily Waste (Unknown)
Other Organic (Explosive)
Solvents (Toxic/Persistant/Ignitable)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Groundwater (Environment)
Surface water (Population/Environment)
Fire/Explosion (Population/Environment)
Direct Contact (Population/Environment)

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT: Robert Munger	02 OF (Agency/Organization): IEPA / DLPC	03 TELEPHONE NUMBER: (815) 987-7404
04 PERSON RESPONSIBLE FOR ASSESSMENT: Robert Munger	05 AGENCY: IEPA · 06 ORGANIZATION: DLPC · 07 TELEPHONE NUMBER: (815) 987-7404	08 DATE: 7 / 13 / 81 (MONTH DAY YEAR)

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	5210021833

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- X A. SOLID
- B. POWDER, FINES
- X C. SLUDGE
- D. OTHER (Specify)
- E. SLURRY
- F. LIQUID
- G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities not additive)

- TONS:
- CUBIC YARDS: Unknown
- NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- X A. TOXIC
- B. CORROSIVE
- C. RADIOACTIVE
- X D. PERSISTENT
- E. SOLUBLE
- F. INFECTIOUS
- G. FLAMMABLE
- X H. IGNITABLE
- I. HIGHLY VOLATILE
- X J. EXPLOSIVE
- K. REACTIVE
- L. INCOMPATIBLE
- M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	Unknown		
SOL	SOLVENTS	Unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	None known				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	trichloroethane	25323-89-1	FDS	copper	7/6/9
FDS	chromium (Plating solution)	7440-47-3	FDS	zinc	999
FDS	nickle	7440-02-0	FDS		
FDS	cadmium	7440-43-9	FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports.)

Arch. Survey's report (Attached)
Site file IEPA, DAPC Moline District
Site file IEPA, DLPC Rockford Region
Installation Assessment of Rock Island Arsenal Report No. 164, US Army Toxic and Hazardous Materials Agency

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	5210021833

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 384,000
04 NARRATIVE DESCRIPTION
City waste was found by archeologists in the Hartman Reroute area. If this waste contains hazardous constituents it could contaminate ground water.

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 384,000
04 NARRATIVE DESCRIPTION
Bettendorf, Davenport, Rock Island, and Moline all use the Mississippi as a water supply. Run off or seepage into Mississippi could effect all of these water supplies.

01 [ ] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE ____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ____
04 NARRATIVE DESCRIPTION
None known

01 [X] D. FIRE EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 384,000
04 NARRATIVE DESCRIPTION
DAPC records indicate that some unexploded bombs may be present in the proving grounds on the west end of the site.

01 [X] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 6,500
04 NARRATIVE DESCRIPTION
6,500 people work on the Island. Contact is unlikely since no one works in areas where hazardous wastes might be present.

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: 5 1/2 (Acres)
04 NARRATIVE DESCRIPTION
See A above.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 384,000
04 NARRATIVE DESCRIPTION
The surrounding communities get their water from the Mississippi River.

01 [X] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 6,500
04 NARRATIVE DESCRIPTION
The potential for worker exposure is low no workers on the Island work in the possible hazardous waste disposal areas.

01 [ ] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE ____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ____
04 NARRATIVE DESCRIPTION
None known.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	5210021833

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [ ] J DAMAGE TO FLORA — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None known

01 [ ] K DAMAGE TO FAUNA — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

None known

01 [ ] L CONTAMINATION OF FOOD CHAIN — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None Known

01 [ ] M UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

None known

01 [ ] N DAMAGE TO OFFSITE PROPERTY — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None known

01 [ ] O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None known

01 [ ] P ILLEGAL/UNAUTHORIZED DUMPING — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None known

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 334,000

IV. COMMENTS Additional Sources of information

Archeologists report (Attached)

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site File DAPC, IEPA Moline District
Site File DLPC, IEPA Rockford Region
Installation Assessment of Rock Island Arsenal Report No. 164, US Army Toxic & Hazardous Materials Agency

EPA FORM 2070-12 (7-81)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM

DATE: July 18, 1984

TO: R. A. Wengrow

FROM: R. L. Munger RLM.

SUBJECT: 16181301 - Rock Island County
Rock Island/Rock Island Arsenal
IL5210021833

This facility has been in use by the U. S. Army since July 1862 when Congress approved use of the site as a western Armory. Since then, the site has been used for manufacturing of small arms, and gun mounts, repair and modification of tanks, and loading ammunition and proof firing. The activities included the following industrial processes: casting of ferrous and non-ferrous metals, sheet metal piercing and forming, forging, welding, plating, painting, operation of proof-firing ranges, paint stripping, cleaning, machining, lubricating and metal surface treatment. Division of Air Pollution Control records and ISS inspection reports also mention degreasing with chlorinated solvents and recovery of spent solvents in small stills located in various areas in the arsenal.

According to the 103(c) notification and the Installation Assessment of Rock Island Arsenal Report No. 164 by the U. S. Army Toxic and Hazardous Materials Agency, the two main areas of concern are a landfill on the southern edge of the Island and an area referred to as "area 14" in the eastern third of the Island.

Water obtained from three test holes around the sanitary landfill has been analyzed for heavy metals and based on the results it was concluded that the landfill was not affecting groundwater quality. However, the samples were not tested for parameters which would detect pollution caused by still bottoms from the reclemation of spent solvents and we have no indications that spent solvents or still bottoms were not disposed of here.

The possible existence of contamination in area 14 was discovered during archeological explorations. The archeologists report contains observations which suggest the area had been used to dispose of oily wastes. No samples have been taken from the area for chemical analysis so the exact nature of the contamination, if any, is not known.

This site should be inspected on a medium priority basis. Contamination may have occurred, but there does not appear to be any immediate threat to public health. That inspection should include analysis of groundwater samples from the old landfill area for volatile chlororganics and a search of area 14 to find areas mentioned in the archeologists report. Monitor wells in the vicinity of area 14 may be required.

tl
cc: David Jansen (2) √
Rockford Office (2)

DEPARTMENT OF THE ARMY
ROCK ISLAND ARSENAL
ROCK ISLAND, ILLINOIS 61299

Dr. Shore/mah/
(309) 794-5504

REPLY TO
ATTENTION OF:

June 15, 1984

SMCRI-EN

Mr. Robert L. Munger, E. I. T.
Field Operations Section
Division of Land Pollution Control
Illinois Environmental Protection Agency
P. O. Box 915
Rockford, Illinois 61105

Dear Mr. Munger:

This letter is in response to your letter of June 6, 1984, referencing your file entitled, "Rock Island County - No 16181301 Rock Island/Rock Island Arsenal IL 5210021833." The portions of the archeologists' report referred to in the Notification of Hazardous Waste Site (EPA Form 8900-1) are enclosed.

The Environmental Coordinator visited the site in question as soon as these observations were known, about seven months after the findings. Some of the unmarked excavation sites were found, but vegetation, decaying leaves, settling, and erosion obscured the others. None of the contaminants described were observed at that time. As a result, none of the observations have been verified.

Sincerely,

WALTER M. KISNER
Director, Engineering Directorate

Enclosures

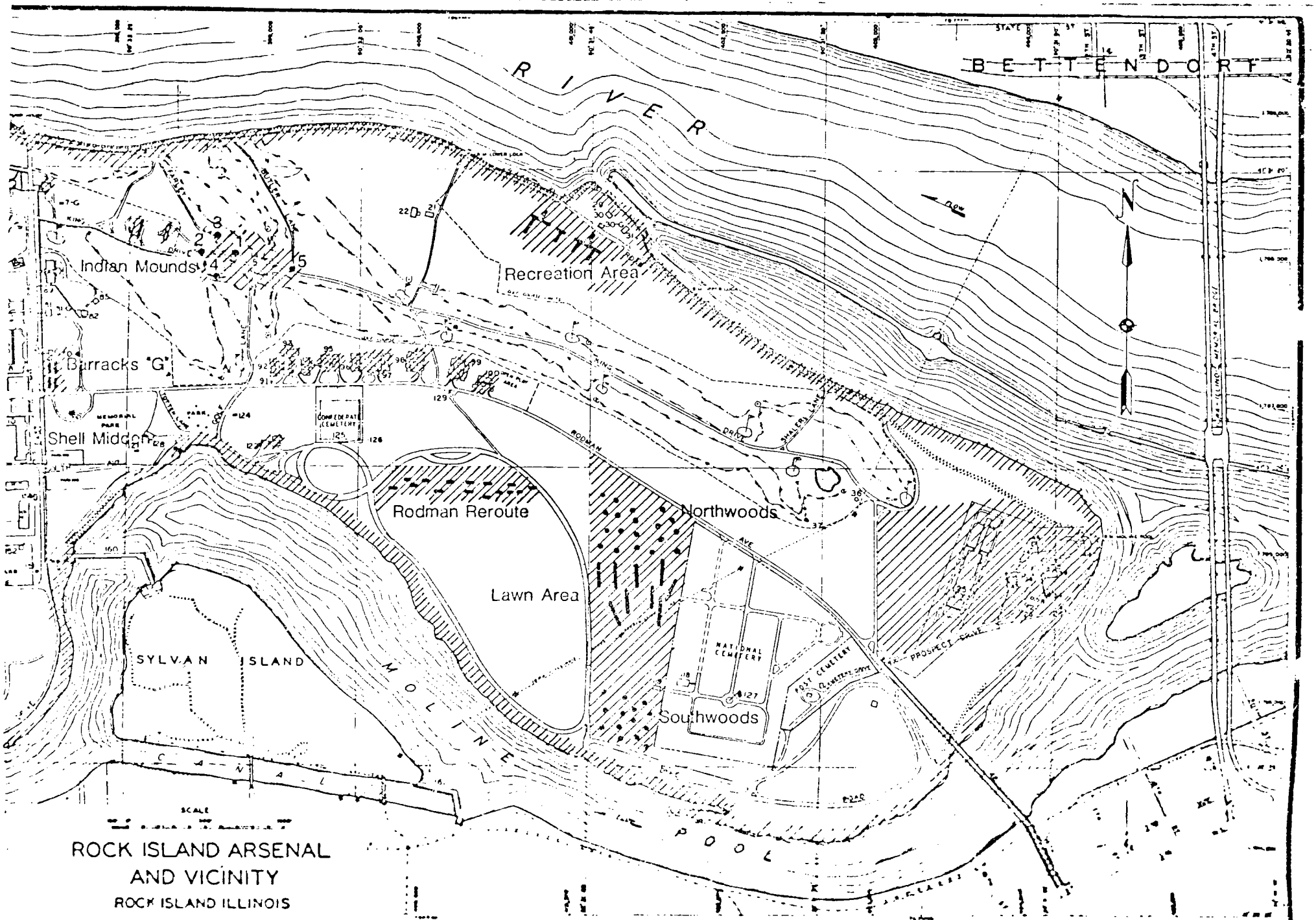

Fig. 26 Areas Surveyed

and shell deposits covered an area no greater than approximately 4m by 4m. The first unit, about four meters from the edge of the bank, was taken to a depth of 80cm. Shell was encountered from 25 to 40cm below the surface. The second unit, located at the edge of the bank where shell was scattered on the surface, was taken down to 60cm. The shell layer was 10cm thick from the surface and mixed with gravel.

The predominant species in the deposit were the Monkey-Face (Quadrula metanevra Rafinesque; Parmalee 1967:39), the Purple Warty-Back (Cyclonaias tuberculata Rafinesque; Parmalee 1967:27), and the Mucket (Actinonaias carinata Barnes; Parmalee 1967:56). The mixture of species and the presence of a hammerstone indicate this was a cultural rather than natural deposit. The primary problem, which remains unresolved, is whether the deposit was prehistoric or historic. The presence of the hammerstone suggests prehistoric activity, but not conclusively. It is known that Civil War guards and prisoners, and other historic period persons have collected shells from time to time. Furthermore, the presence of early historic concrete piers nearby suggests that the shell/gravel mixture may have been accumulated for use in concrete mixing. Although Ferrel Anderson, president of the Quad Cities Archaeological Society and an Arsenal employee, indicated that others in the past had found cultural material, only one apparent hammerstone was found.

Proposed Recreation Area. Located on the north side of the Island (Fig. 25), this area will include two baseball fields and at least one fieldhouse. No prehistoric or historic sites were mentioned in any of the documentary sources checked for this area.

Nine trenches were dug averaging a meter in depth, and two to 75 meters in length. Examination of the soil indicated its major composition to be fill. Conversations with Arsenal and golf course personnel confirmed our conclusions. The area had been leveled during construction of the dike along the north shore of the Island. Dirt was borrowed to build the base and leveling was completed in the last decade to accommodate recreational users. The central part of the area also has been disturbed through the locating of the leaching pool/septic system for Quarters 30 and 31 (Fig. 25).

Rodman Reroute. The relocation of Rodman Avenue will cut across a wooded area (Fig. 25) which has been used in the past as a dumping ground and discreet storage area. Documentary information (Map of Rock Island Arsenal, n.d.) indicated that among the possible finds to be encountered was a powder magazine, but it is believed that the structure was never built (Bouilly, personal communication).

After preliminary pedestrian reconnaissance, 15 test units were mechanically excavated along the proposed relocation area. Trees, their roots, and large concentrations of thorn bushes made it difficult to survey some parts. In the case of a few test units, the presence of unknown materials--seemingly lubricants, oils, and white crystalline chemical accretions--precluded a thorough examination.

No cultural materials were uncovered in any of the tests.

1919 Barracks. Temporary living quarters were built to house workers in 1918. On 1 January 1919, fire destroyed the one designated as Barracks "G" (Fig. 26, 27). Available time for working here was limited, so testing involved no more than determining the nature of extant remains.

Two trenches were dug on a north-south line, about 15 meters apart. In both, the presence of large amounts of limestone, probably from the foundation of the former barracks, was noted.

Artifacts recovered from trench #2 included earthenware sherds, miscellaneous glass fragments, and wire nails found at 25-30cm below the surface, mixed with crushed limestone. Although temporally nondiagnostic, everything recovered was consistent with an early 20th-century date.

Indian Mounds. Among Rock Island's most noted features are a series of mounds located on a Coyne fine sand ridge (USDA 1977: Sheet 24) terrace on the north side of the Island (Fig. 26). It always has been assumed that they were of aboriginal Indian manufacture, and a sign currently marks the largest one as an "Indian Mound" (Fig. 28). Early references to them include an interview with a Mr. Watts by the local historian, John Hauberg. Watts describes how, when he was five or six years of age, residents on the Island "dug into the mounds and discovered Indian remains," taking "some trinkets, beads and a pipe away" (Hauberg Collection, interview of 12 January 1920). Which specific mound he was referring to is not known. Another reference comes from W. T. Norton, a guard at the Civil War prison camp, who writes that he and other guards found many arrowheads and other aboriginal relics during their off-duty hours (Rock Island Daily Union, 3 October 1915). The camp's location was not far from the mounds.

The first scientific attempt to excavate the mounds was in 1875 when the Davenport Academy of Science expressed an interest. Flagler discouraged it, believing them to be "natural curiosities" and "a valuable attraction and addition to the grounds of the arsenal." He also expresses his ignorance as to the mounds' contents, noting that they have been "carefully preserved" since his arrival, although they

The 14 trenches were consistent and individual notes proved unnecessary.

No artifacts were recovered.

SHELL MIDDEN
(Fig. 26)

The units, already described in the report, were taken down in 10cm levels.

PROPOSED RECREATION AREA
(Fig. 26)

Nine trenches ranging from two meters to 75 meters in length were excavated. No individual notes were taken at the trenches excavated here, since it was learned early that the area had undergone severe modifications. No cultural materials were recovered.

RODMAN REROUTE
(Fig. 26)

Fifteen trenches were dug into the strip that will be affected by the rerouting. Many differences were noted in soil color, texture, etc. No cultural materials were recovered.

Test #1:

0-2cm	humus
2-45cm	brown (10YR5/3) clayey silt
45-71cm	yellow-brown (10YR5/6) silty clay very dry and compact

Test #2:

0-10cm	humus
10-45cm	brown clayey silt
45-86cm	yellow-brown dry clay
86cm	bedrock

Test #3:

0-10cm	humus
10-76cm	brown clayey silt
76-81cm	yellow-brown dry clay
81cm	bedrock

Test #4:

0-15cm	humus
15-66cm	brown clayey silt
66-81cm	yellow-brown clay
81cm	bedrock

Test #5a: Low spot with grease and apparently chemically contaminated soil along surface and especially in humus. The crew did not put in a trench but moved 50 meters south. (The use of terms such as "grease" and "chemical" in these contexts does not imply a technical analysis, but only an attempt to describe observed phenomena in lay terms.)

Test 5b: Less grease and chemicals encountered; mostly confined to the surface; 10-81cm--yellow-brown clay; bedrock at 81cm.

Test #6: Like #5, this unit also is in a chemically affected area but not as bad.

0-5cm	greasy humus
5-36cm	black greasy soil
36-66cm	dark brown, greasy silt
66-79cm	yellow-brown clay
79cm	bedrock

Test #7:

0-40cm	greasy soiled humus and silt mixture

40-66cm	brown silty clay
66-81cm	yellow-brown clay, but moist--not dry as in other tests.

Test #8:

0-50cm	black oily silt
50-66cm	black, oily silty clay
66-76cm	yellow-brown clay
76cm	bedrock

Test #9: Same as #8; bedrock at 84cm.

Test #10:

0-53cm	black oily humus/sandy silt mix
53-66cm	yellow-brown silty clay
66-79cm	reddish-brown (5YR4/4) clay
80cm	bedrock

Test #11:

0-63cm	black oily humus/silt mix
63-81cm	yellow-brown silty clay
81cm	bedrock

Test #12:

0-76cm	extremely greasy humus/silt mix
76-79cm	yellow-brown, red marbled clay
79cm	bedrock

Test #13:

0-38cm	humus and dark brown silty clay
38-60cm	reddish-brown clay

60cm	bedrock

Test #14

0-15cm	humus
15-74cm	reddish-brown silt
74cm	bedrock

Test #15:

0-10cm	humus
10-60cm	brown, reddish-brown silt
60cm	bedrock

1919 BARRACKS
(Fig. 26)

Figure 23b shows the location of the two trenches.

INDIAN MOUND
(Fig. 26)

UNIT 1:

Level 1 (0-20cm)--sand/silt mix; artifacts include scrap metal, plastic waste and a lead shot

Level 2 (20-40cm)--sand, heavily stained from burrowing activity; four secondary chert flakes recovered

Level 3 (40-60cm)--sand; no artifacts

UNIT 2: (Levels follow surface contour)

Level 1 (0-20cm)--sand/silt mix; artifacts were one chert flake and one piece of iron spike

Level 2 (20-40cm)--sand; one secondary decortication flake found

Level 3 (40-60cm--sand; no artifact recovery